

## 1N4001FL THRU 1N4007FL General Purpose Plastic Rectifier



### Features

- Low forward voltage drop
- Low leakage current
- High forward surge capability
- Solder dip 260 ° C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- **Case:** SOD-123FL molded plastic
- **Terminals:** Plated leads solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.0007 ounce, 0.02 grams

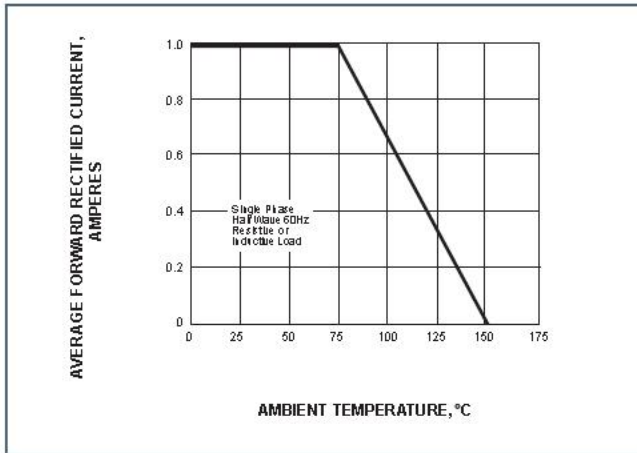
### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	1N 4001FL	1N 4002FL	1N 4003FL	1N 4004FL	1N 4005FL	1N 4006FL	1N 4007FL	Units
<b>Marking code</b>		<b>A1</b>	<b>A2</b>	<b>A3</b>	<b>A4</b>	<b>A5</b>	<b>A6</b>	<b>A7</b>	
Maximum repetitive peak reverse voltage Maximum DC blocking voltage	V <sub>RRM</sub> V <sub>DC</sub>	<b>50</b>	<b>100</b>	<b>200</b>	<b>400</b>	<b>600</b>	<b>800</b>	<b>1000</b>	V
Maximum RMS voltage	V <sub>RMS</sub>	<b>35</b>	<b>70</b>	<b>140</b>	<b>280</b>	<b>420</b>	<b>560</b>	<b>700</b>	V
Maximum average forward rectified current @T <sub>A</sub> = 75°C	I <sub>(AV)</sub>	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30.0							A
Maximum instantaneous forward voltage at 1.0A	V <sub>F</sub>	1.1							V
Maximum DC reverse current @T <sub>A</sub> = 25°C at rated DC blocking voltage @T <sub>A</sub> = 100°C	I <sub>R</sub>	5.0 50.0							µA
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	15.0							pF
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	75.0							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150							°C

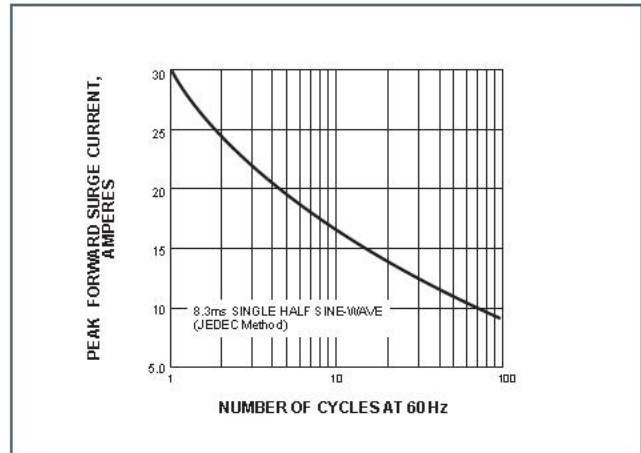
Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

**Ratings and Characteristics Curves**

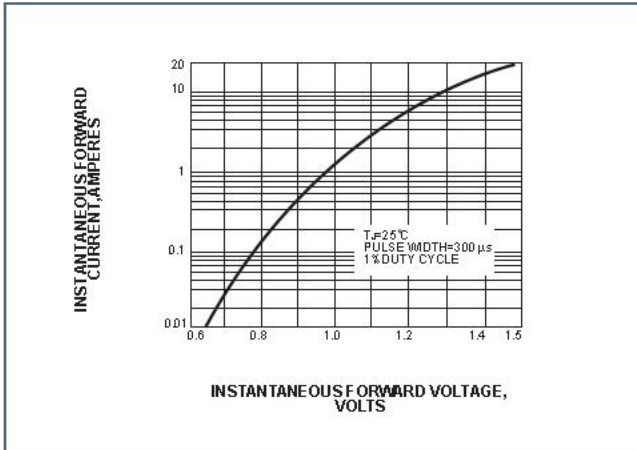
**FIG. 1- FORWARD CURRENT DERATING CURVE**



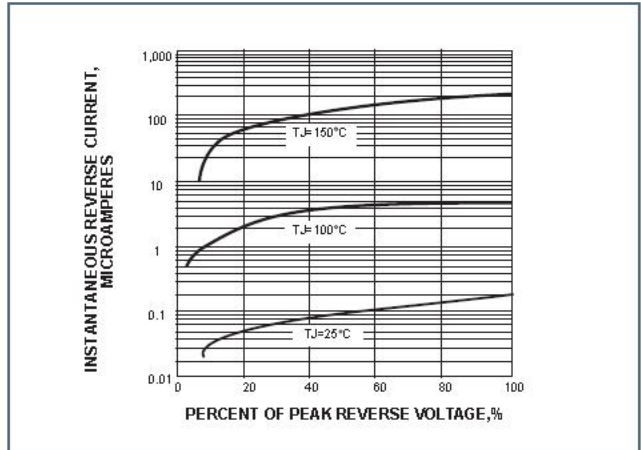
**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



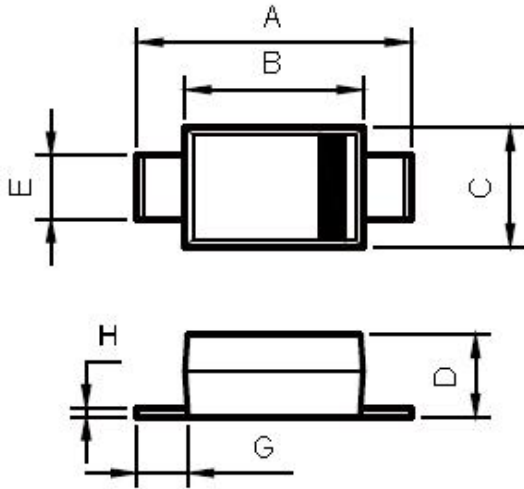
**FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4-TYPICAL REVERSE CHARACTERISTICS**



**Mechanical Dimensions SOD-123FL(Inches/Millimeters)**



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.140	0.152	3.55	3.85	
B	0.102	0.114	2.60	2.90	
C	0.069	0.077	1.75	1.95	
D	0.047	0.055	1.20	1.40	
E	0.028	0.047	0.70	1.20	
G	0.010	—	0.25	—	

**Ordering Information**

Device	Package	Shipping
1N4001FL THRU 1N4007FL	SOD-123FL	3000pcs / reel

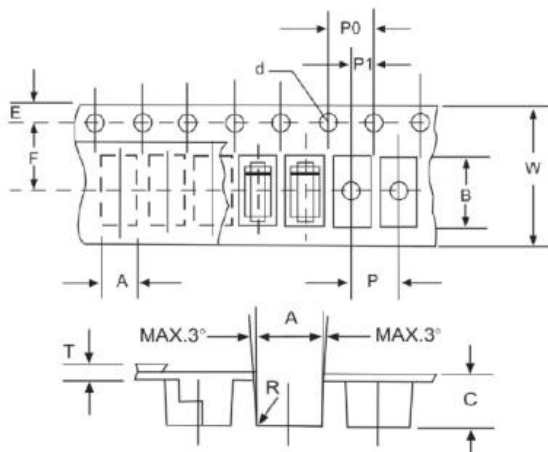
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**



A1 = Marking Code

**Carrier Tape Specification SOD-123FL**



SYMBOL	Millimeters	
	Min.	Max.
A	1.95	2.15
B	3.85	4.05
C	1.35	1.55
d	1.50	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30



1N4001FL  
THRU  
1N4007FL

Technical Data  
Data Sheet N1646, Rev. A



**DISCLAIMER:**

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC Diode Solutions sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall SMC Diode Solutions be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC Diode Solution assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall SMC Diode Solutions be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC Diode Solutions.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC Diode Solutions.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for* [Diodes - General Purpose, Power, Switching category:](#)

*Click to view products by* [Sangdest Microelectronic manufacturer:](#)

Other Similar products are found below :

[MCL4151-TR3](#) [MMBD3004S-13-F](#) [RD0306T-H](#) [RD0506LS-SB-1H](#) [RGP30G-E373](#) [DSE010-TR-E](#) [BAQ333-TR](#) [BAQ335-TR](#) [BAQ33-GS18](#) [BAS1602VH6327XT](#) [BAV17-TR](#) [BAV19-TR](#) [BAV301-TR](#) [BAW27-TAP](#) [HSC285TRF-E](#) [NSVBAV23CLT1G](#) [NTE525](#) [1SS181-TP](#) [1SS184-TP](#) [1SS193,LF](#) [1SS193-TP](#) [1SS400CST2RA](#) [SBAV99LT3G](#) [SDAA13](#) [LL4448-GS18](#) [SHN2D02FUTW1T1G](#) [LS4150GS18](#) [LS4151GS08](#) [SMMD7000LT3G](#) [FC903-TR-E](#) [1N4449](#) [1N4934-E3/73](#) [1SS226-TP](#) [APT100DL60HJ](#) [RFUH20TB3S](#) [RGP30G-E354](#) [RGP30M-E3/73](#) [D291S45T](#) [MCL4151-TR](#) [BAS 16-02V H6327](#) [BAS 21U E6327](#) [BAS 28 E6327](#) [BAS33-TAP](#) [BAS 70-02V H6327](#) [BAV300-TR](#) [BAV303-TR3](#) [BAW27-TR](#) [BAW56DWQ-7-F](#) [BAW56M3T5G](#) [BAW75-TAP](#)